

Standards of Public Land Health

Evaluation of 64034 KLYNA BENCH MARK Allotment

[12/06/2006]

The Roswell Field Office conducted a (RHA) Rangeland Health Assessment at 1 IDSU study site within Klyna Bench Mark, allotment #64034. This assessment evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of this study site. Existing monitoring data was incorporated into and in support of this field assessment. A summary of this assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
64034-IDSU-A155	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Klyna Bench Mark, allotment #64034. Ten of these assessed soil site stability, 11 hydrologic function, and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on 1 IDSU trend plot location within this allotment were utilized to make rangeland health determinations. Quantitative evaluations are performed by the Roswell Field Office, which include some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. These collections which were initiated in the late 1970's/early 1980's are scheduled and conducted approximately every 5 years.

The Klyna Bench Mark allotment is approximately 1,833 acres in size. The majority of the allotment is private land. About 25% of the allotment is state land, and approximately 9% (~160 acres) is public land (BLM), which contains the only study site on the allotment. This allotment consists of gently sloping, undulating terrain ranging in elevation from approximately 3850 feet to 4100 feet. This site was visited on April 23, 2007 and is within a Shallow SD-3 ecosite. According to the permittee, there were no livestock on the allotment.

Site 64034-IDSU-A155 has relatively stable soil. All soil stability indicators rated "slight to moderate" or "none to slight". No gullies were observed near the study site but two gullies were observed in the general vicinity. The area had substantial rock cover lending stability to the site. There was some reduction in resistance to erosion in the plant interspaces. Some soil loss has occurred as indicated by a small amount of pedestalling.

Hydrologic function was rated similarly; however, the increase in shrub cover is having a minor effect on runoff and infiltration. This effect is expected to increase with an increase in shrub density.

Most indicators assessing biotic integrity for the site rated "slight to moderate" or "none to slight". Production was good. Litter amount was greater than expected. The increase in shrubs causes F/S groups to rate "slight to moderate" trending toward "moderate". Invasive Plants rated "moderate" due to the overall increase in shrubs including mesquite, creosote bush, snakeweed, whitethorn, and catclaw acacia. These "increaser" shrubs can be expected to increase regardless of changes in management. Grama grasses, particularly black grama, remain the dominant grasses. Pronghorn antelope and mule deer were observed in the vicinity of the study site. The area provides satisfactory habitat for both.

Recommendations: The area is experiencing a substantial increase in the shrub component compared to what is expected in the ESD. This increased shrub cover is already beginning to affect runoff and infiltration. While minor at this time, this condition is likely to worsen regardless of grazing management practices. Recommend treatment of shrubs through herbicide application or prescribed burning.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64034-IDSU-A155			
Legal Land Desc	NENE 31 0090S 0230E Meridian 23	Acreage	160
Ecosite	042CY025NM SHALLOW SD-3	Photo Taken	Y
Watershed	13060008130 BERRENDO		
Observers	JACKSON; DILLEY	Observation Date	04/23/2007
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	EbC	Soil Taxon Name	ECTOR
Texture Class	NM644 CBV-L	Soil Phase	ECTOR
Texture Modifier	NM644 VERY COBBLY LOAM,D		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	10.55	NOAA Growing Season Precipitation	8.18
NOAA Avg Annual Precipitation	9.73	NOAA Avg Growing Season Precipitation	8.01
Disturbances and Animal Use:	Mule deer and pronghorn antelope herds were present. There are no livestock on the allotment (per communication with permittee and site visit).		
Part 2. Attributes and Indicators			
		Departure from Ecological Site Description/Ecological Reference Areas	

Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:	Short and stable.					
S H	Pedestals and/or Terracettes				X	
Comments:	Minor pedestalling. A few terracettes associated with gullies.					
S H	Bare Ground					X
Comments:	Less than expected. Lots of surface rock.					
S H	Gullies				X	
Comments:	A few observed but mostly stable and vegetated. One unstable gully to the E-NE and one unstable to the south.					
S	Wind-scourd, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement					X
Comments:	Litter is uniformly distributed.					
S H B	Soil Surface Resistance to Erosion				X	
Comments:	Somewhat reduced in interspaces.					
S H B	Soil Surface Loss or Degradation				X	
Comments:	Very minor.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Increase in shrubs (LADI and GUSA) is having a minor effect on runoff and infiltration. This can be expected to increase with an increase in shrub density.					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	Increase in shrubs. Composition of grasses is near expected.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Higher than the expected 8%.					

B	Annual Production					X
Comments:	Total production is >80% of potential.					
B	Invasive Plants			X		
Comments:	Whitethorn acacia, catclaw acacia, mesquite, snakeweed and creosote bush are scattered throughout the site. All could be expected on the site but the increased amounts and their tendency to increase regardless of management places this in the moderate category.					
B	Reproductive Capability of Perennial Plants					X
Comments:	Desireable grasses produced seed in 2006.					
S	Physical/Chemical/Biological Crusts				X	
Comments:	Evident throughout, but continuity is broken.					
B	Wildlife Habitat					X
Comments:	Satisfactory for antelope and mule deer.					
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					X
Comments:	N/A					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	6	4
H	Hydrologic	0	0	0	6	5
B	Biotic	0	0	1	4	8

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate

box for each attribute to denote final agreed upon determination by the ID team.				
Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Soils are relatively stable with minimal evidence of erosion. There is lots of surface rock lending stability to the site.	0	0	10
Hydrologic		0	0	11
Biotic	Production is good. Species diversity is good. There has been a substantial increase in shrubs compared to the ESD. They will likely continue to increase. The increase in "increaser" shrubs causes Invasive Plants to rate moderate.	0	1	12
<p>Site Notes: Soils are relatively stable. There has been minimal soil loss as indicated by the small amount pedestalling. The high amount of surface rock lends stability to the site. Gramas, particularly black grama, dominant the grass community. Shrubs have increased substantially over what is expected in the ESD. A group of mule deer and a group of antelope were observed on the site.</p> <p>A physical study plot has not been established for this site. The photos were taken at the UTM coordinates 13S 532443 3706006. Photo #1 is of the frame; Photo #2 is taken at 0 degrees; Photo #3 is taken at 120 degrees; Photo #4 is taken at 240 degrees (all corrected for declination).</p> <p>Plants encountered included:</p> <p>shrubs: GUSA, ACGR, ACCO (whitethorn), PRGL, OPUNT (cholla), DAFO, NOLINA, LADI2 forbs: ERIOG, ERBO, Lesquerella, Dyssodia pentachaeta grasses: BOGR2, BOER, PAHA, TRPI, BOCU, HIMU</p>				

Determination of Public Land (Rangeland) Health for 64034 KLYNA BENCH MARK

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on these assessments, it is my determination that public land within Klyna Bench Mark, allotment #64034, meets the (1) Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ EDDIE BATESON
Assistant Field Manager

08/24/2007
Date